

service combinations are transmitted exclusively using dedicated channels.

- It is possible to allocate common channels on a connection-oriented basis and dynamically, depending on the current number of used channels.

Exemplary embodiments of the invention are explained in more detail with reference to the appended drawings, in which

- 10 Figure 1 shows a schematic illustration of a radio communication system,
- Figure 2 shows a layer model of the transmission protocols,
- Figures 3, 4 show data for various services mapped onto jointly used physical channels,
- 15 Figures 5, 6 show tables containing allocation options for common channels for a plurality of connections,
- Figures 7, 8 show ambiguous allocations and hence reduction in the likelihood of blockages, and
- 20 Figure 9 shows data transmission in frames with in-band signaling.

25 The mobile radio system shown in Figure 1 as an example of a radio communication system comprises a multiplicity of mobile switching centers MSC which are interlinked and set up access to a landline network PSTN. In addition, these mobile switching centers MSC are connected to at least one respective device RNM for controlling the transmission resources. Each of these devices RNM permits, in turn, a connection to at least one base station BS.

35 A base station BS can set up a connection to subscriber stations, e.g. mobile stations MS or other mobile and

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stationary terminals, via a radio interface. Each base station BS forms at least one radio cell. Figure 1 shows connections for transmitting user information between a base station BS and

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mobile stations MS. Within a connection V1, data for, by way of example, three services S (S1, S2, S3) are transmitted within one or more physical channels Phy CH, and signaling information, e.g. the allocated  
5 radio system resources for a connection V1, is transmitted via a monitoring channel FACH (Forward link Access CHannel) which accompanies the connection.

An operation and maintenance center OMC provides  
10 monitoring and maintenance functions for the mobile radio system or for parts thereof. The functional scope of this structure can be transferred to other radio communication systems in which the invention can be used, in particular for subscriber access networks with  
15 wireless subscriber access.

In the radio communication system shown in Figure 1, both the base stations BS and the mobile stations MS are provided with transmission means and signaling  
20 means which communicate with one another. The transmission means are used for transmitting data for a combination of a plurality of services S via the currently available physical channels Phy CH. The physical channels Phy CH may be in the form of  
25 dedicated channels DCH, i.e. used exclusively by one connection, or in the form of common channels DSCH, i.e. used alternately by different connections V1, V2. A distinction therefore needs to be drawn between physical channels Phy CH jointly used by a plurality of  
30 services S1, S2, S3 on a connection V1 and common channels DSCH, which are allocated to a plurality of connections V1, V2 but is allocated to just one of the connections V1 or V2 for use during a period of time. The allocation of a common channel DSCH can be changed  
35 very rapidly from frame to frame without additional